

FIG. 1

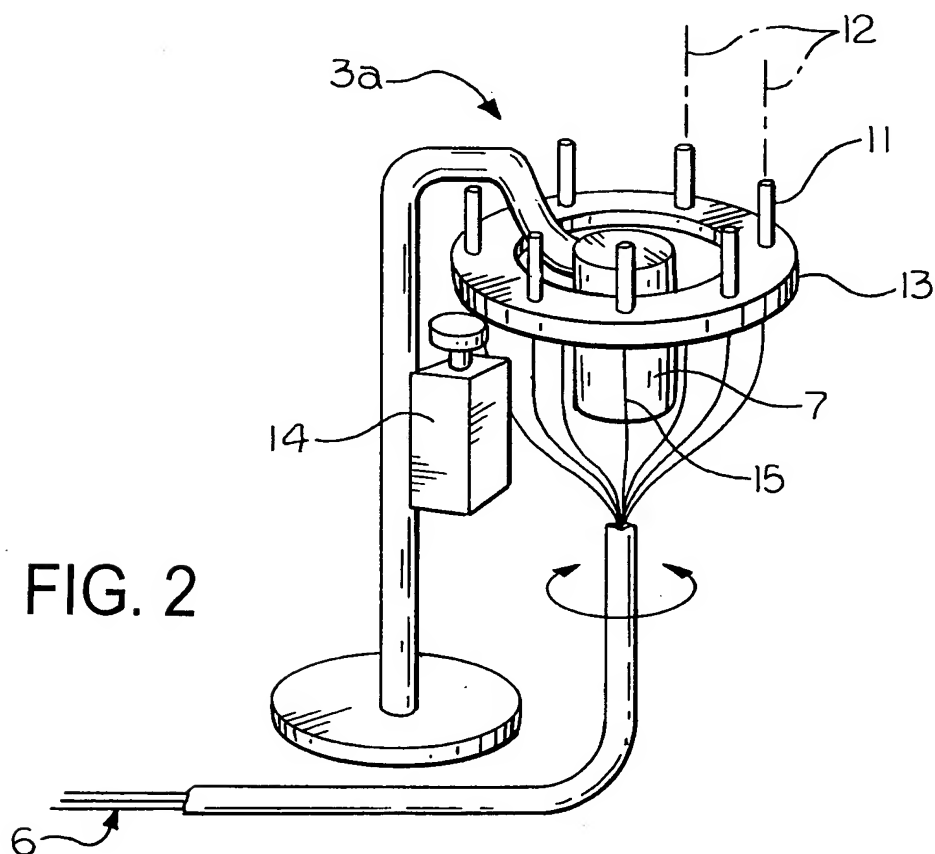
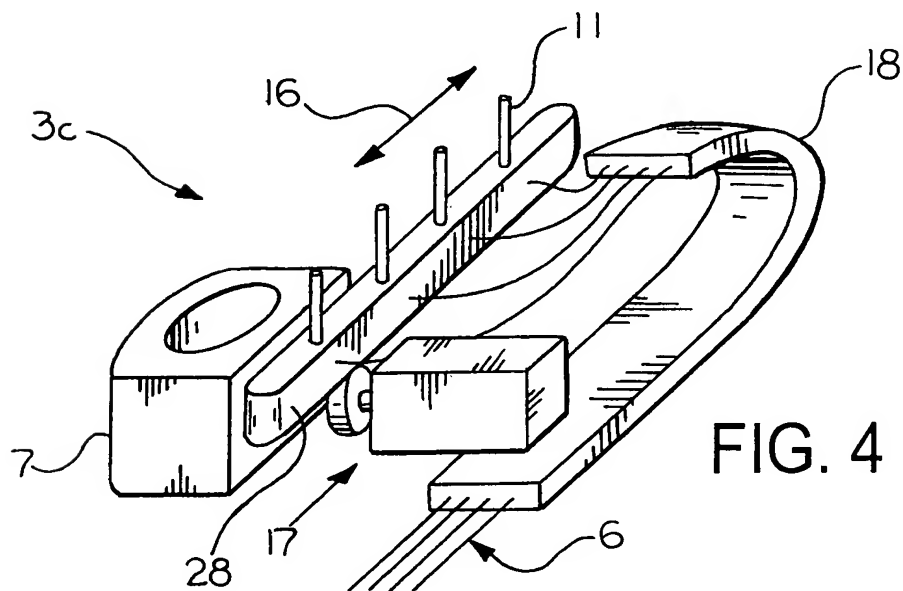
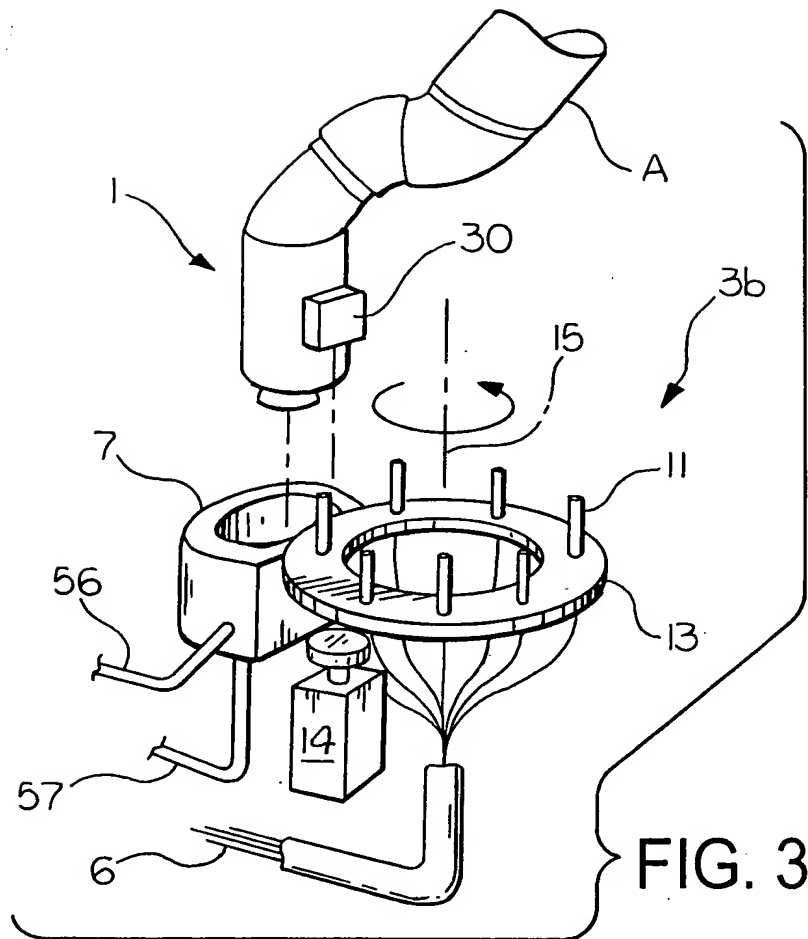
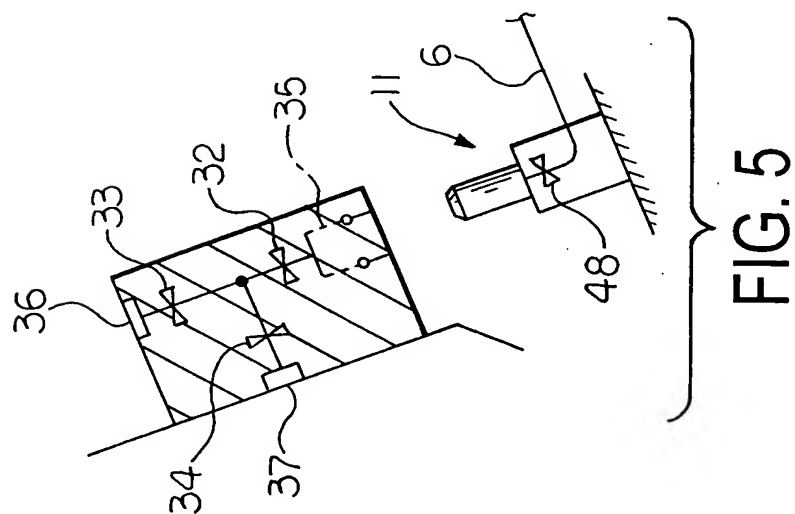
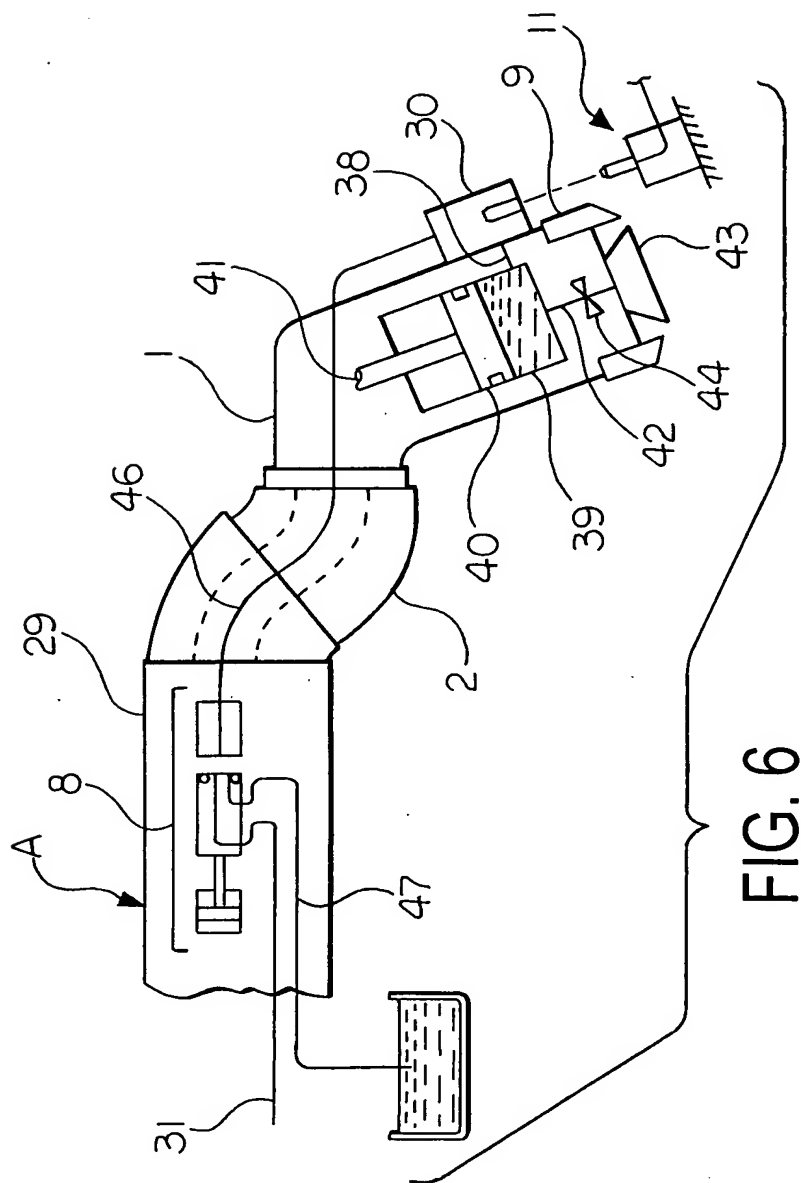


FIG. 2





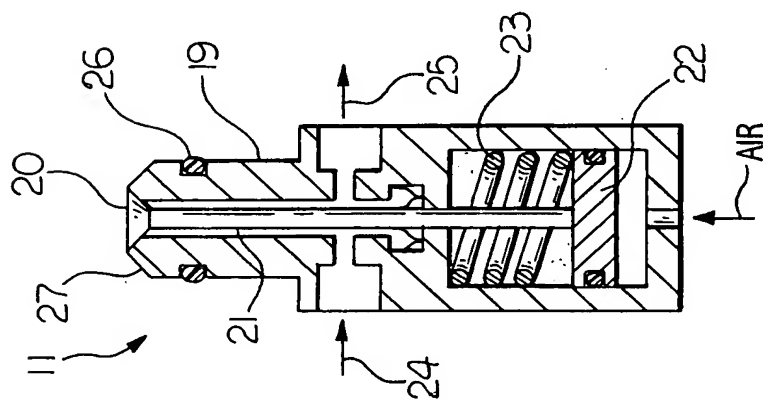


FIG. 7

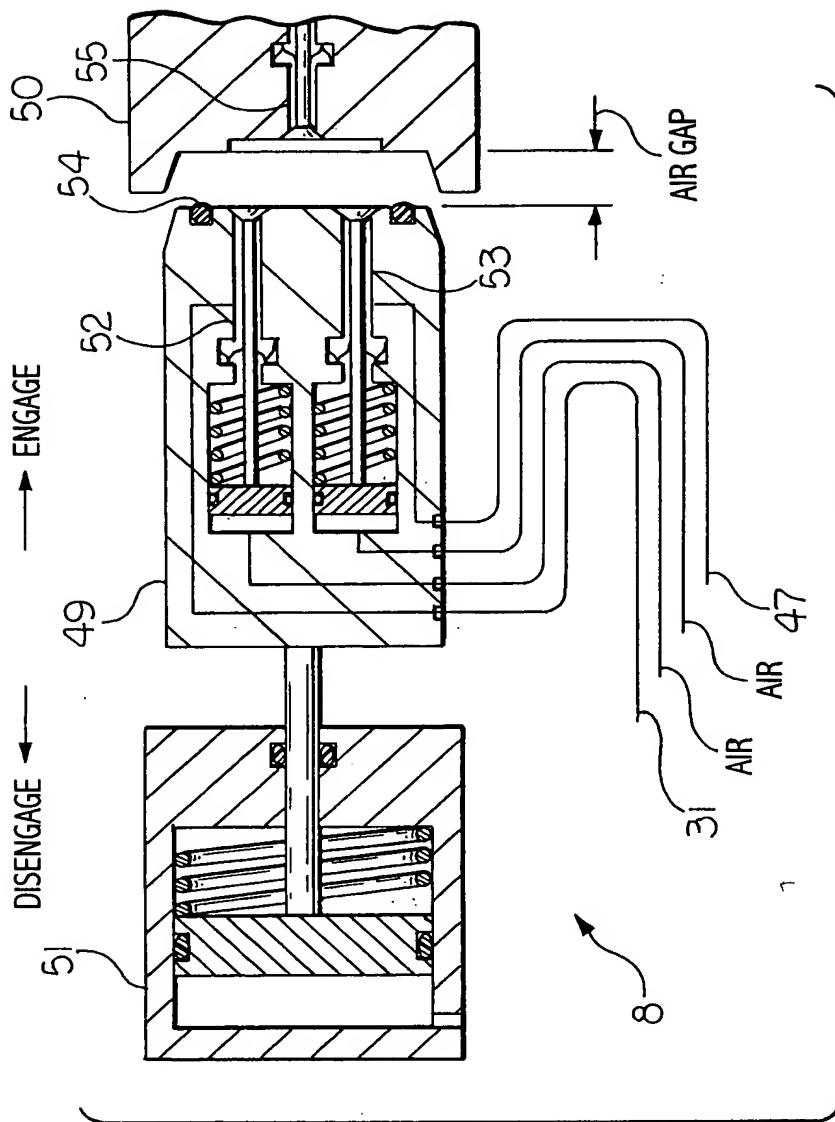


FIG. 8

PROCESS STEP	DESCRIPTION	VALVE STATE								DOCKING POSITION	PISTON POSITION
		8	52	53	55	32	33	34	44	48	
A	FINISHED PAINTING GREEN										AT BOTTOM
B	CLEAN PISTON FACE AND BELL CUP, INDEX INJECTOR	ON	ON		ON		ON	ON	ON		OSCILLATE NEAR BOTTOM
C	DOCK WITH PAINT SUPPLY										AT BOTTOM
D	PRIME LINES WITH RED PAINT					ON		ON	ON	ON	AT BOTTOM
E	FILL CANISTER WITH RED PAINT					ON		ON		ON	RETRACTING
F	LEAVE DOCK & CLEAN INJECTOR	ON	ON		ON	ON	ON				AT TOP
G	CLEAN CONTROL VALVE FACE	ON	ON	ON							AT TOP
H	PAINT WITH RED								ON / OFF		DISPENSE

FIG. 9

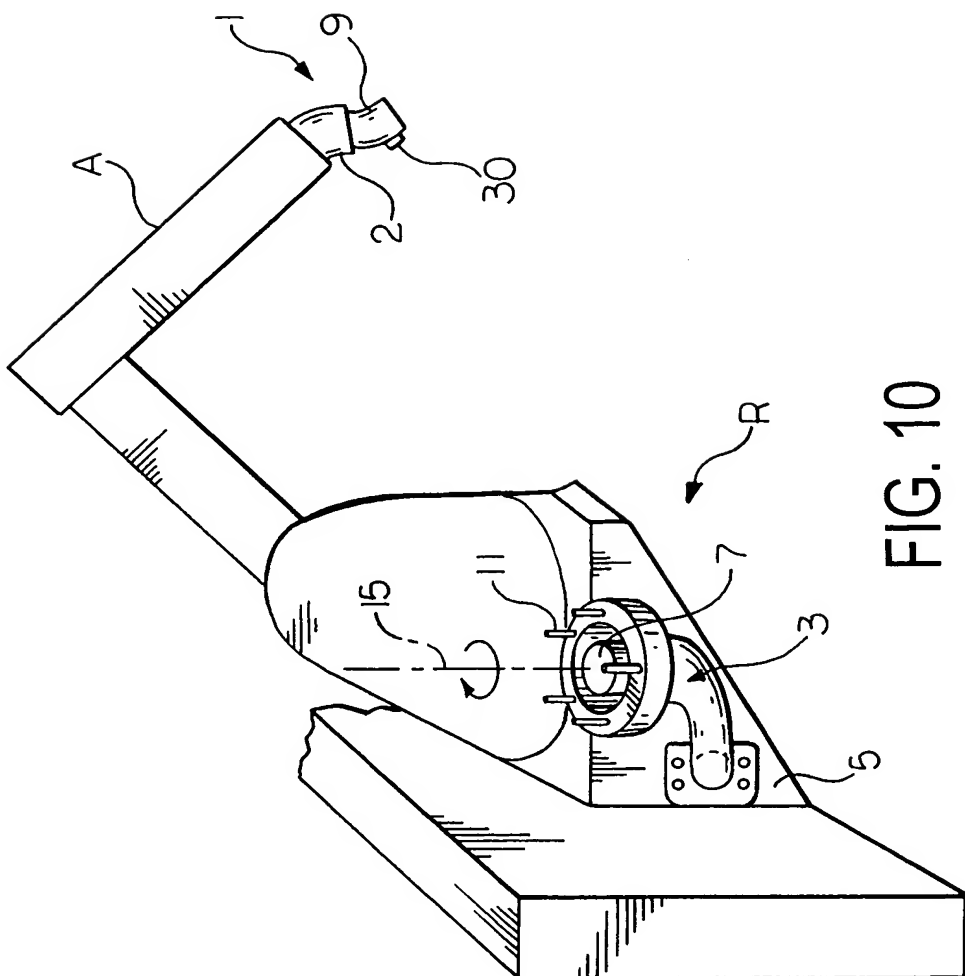


FIG. 10

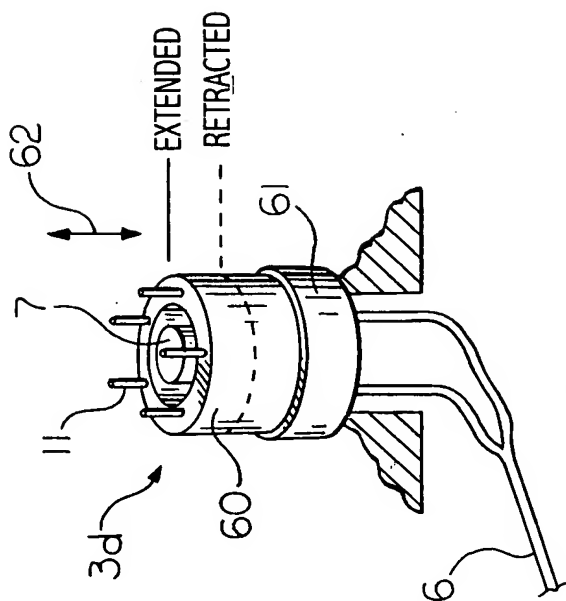


FIG. 11

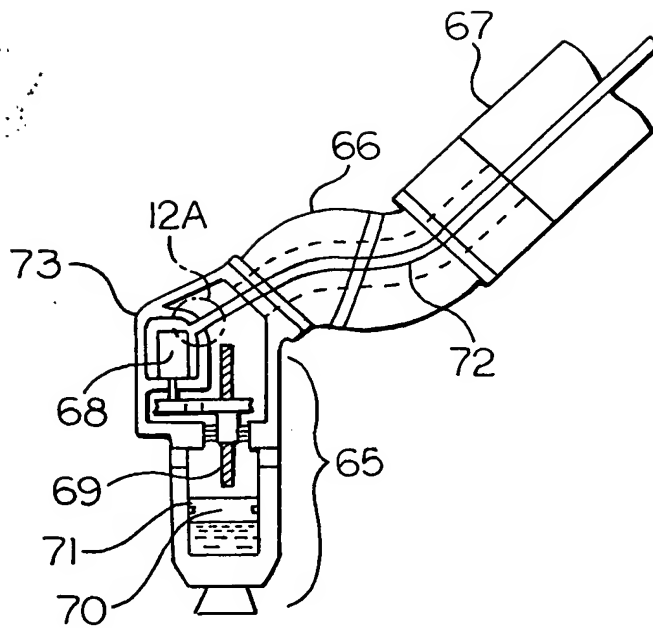


FIG. 12

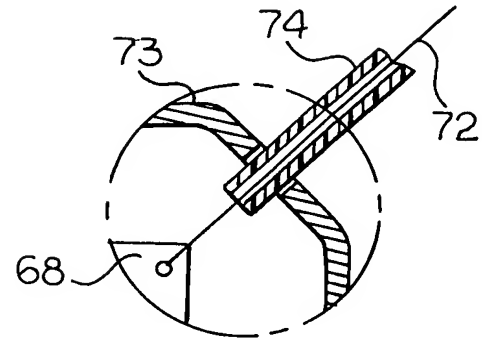


FIG. 12A

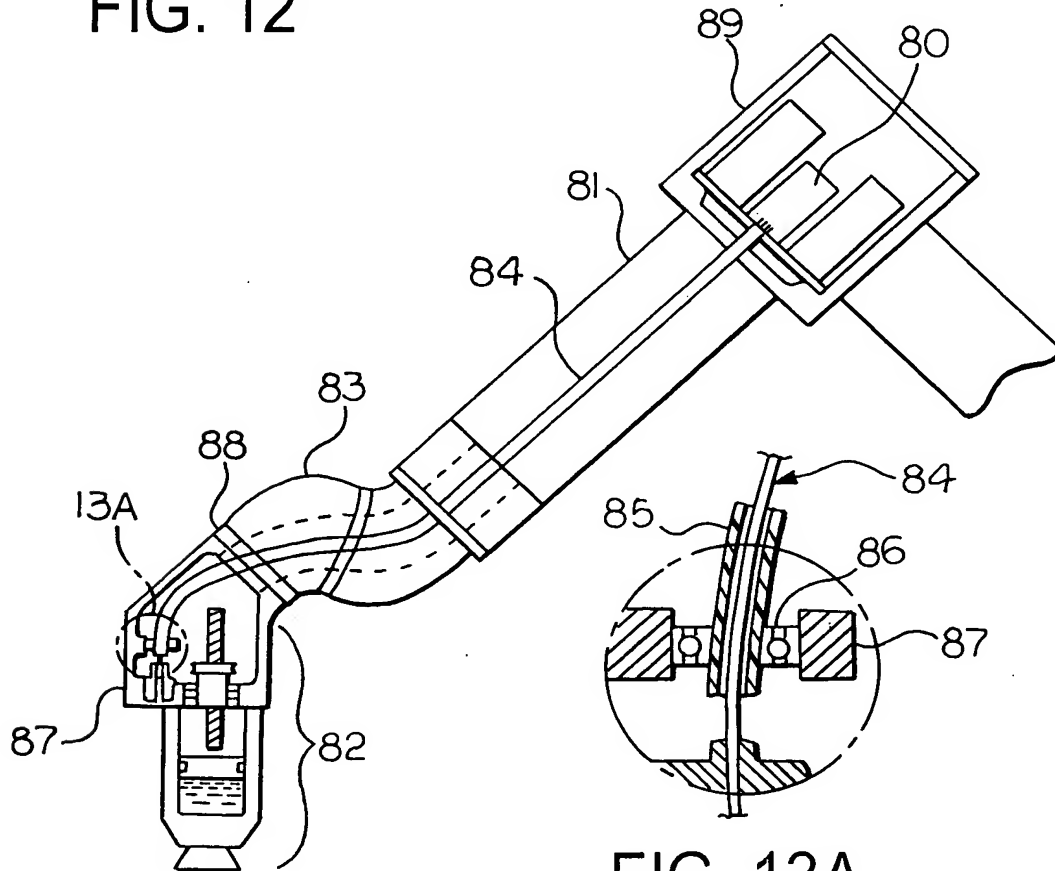


FIG. 13

FIG. 13A

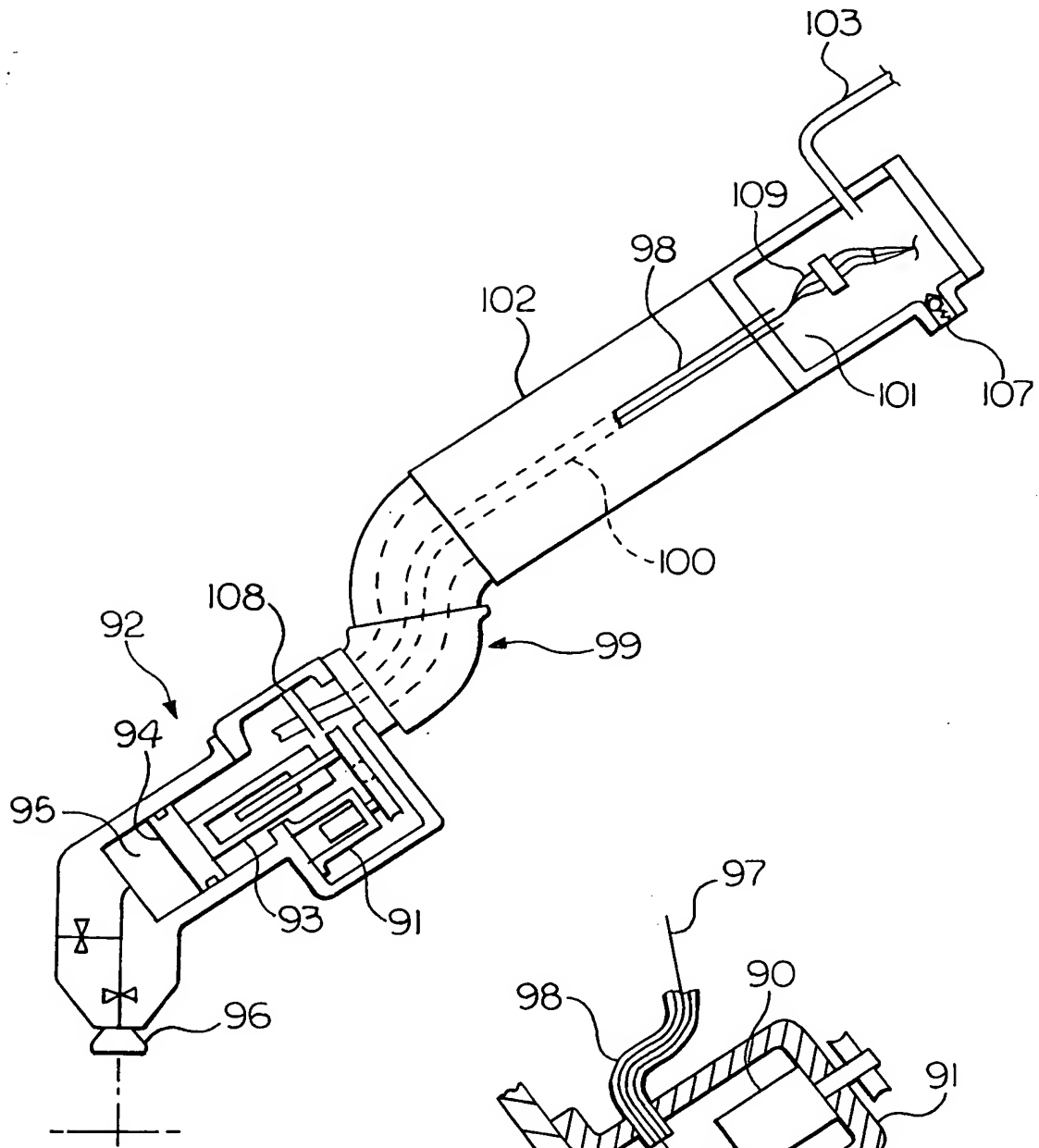


FIG. 14

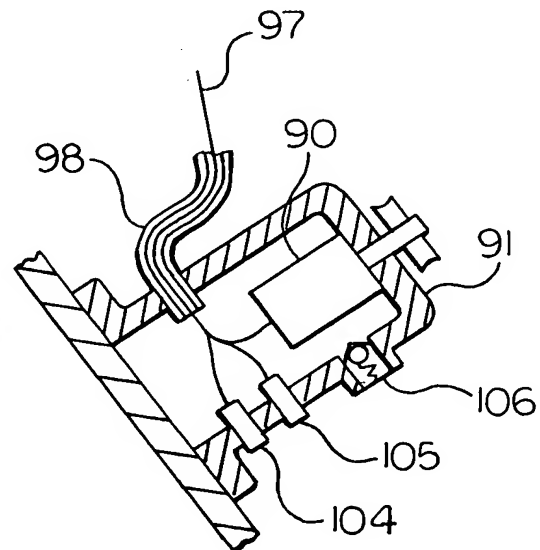


FIG. 15





FIG. 17

PROCESS SEQUENCE - CHANGING COLOR	DOCKED	VALVE											
		A	B	C	D	E	F	G	H	I	J	K	L
DONE PAINTING RED	NO												
CLEAN PISTON FACE & INSIDE BELL CUP	NO	ON	ON	ON							ON		
CLEAN OUTSIDE OF BELL	YES/NO			ON					ON		ON		
INDEX TO GREEN SUPPLY	YES/NO	VALVE POSITION N/A (CAN BE PARALLEL PROCESS)											
CLEAN SHROUD	YES	VALVE POSITION N/A (CAN BE PARALLEL PROCESS)											
PRIME LINES WITH GREEN	YES	ON	ON		ON		ON					ON	ON
FILL CAN WITH GREEN	YES		ON		ON		ON					ON	ON
CLEAN & DRY DOCKING INTERFACE	YES			ON	ON	ON					ON		ON
CONTINUE DRYING	NO			ON	ON	ON					ON		
PAINT WITH GREEN	NO	ON											

FIG. 18

PROCESS SEQUENCE - REFILLING SAME COLOR	DOCKED	VALVE											
		A	B	C	D	E	F	G	H	I	J	K	L
DONE PAINTING RED	NO												
CLEAN INSIDE & OUTSIDE OF BELL	YES/NO			ON					ON	ON	ON		
CLEAN SHROUD	YES	VALVE POSITION N/A (CAN BE PARALLEL PROCESS)											
PRIME LINES WITH RED	YES	ON	ON		ON		ON					ON	ON
FILL CAN WITH RED	YES		ON		ON							ON	ON
CLEAN & DRY DOCKING INTERFACE	YES			ON	ON	ON					ON		ON
CONTINUE DRYING	NO			ON	ON	ON					ON		
PAINT WITH RED	NO	ON											

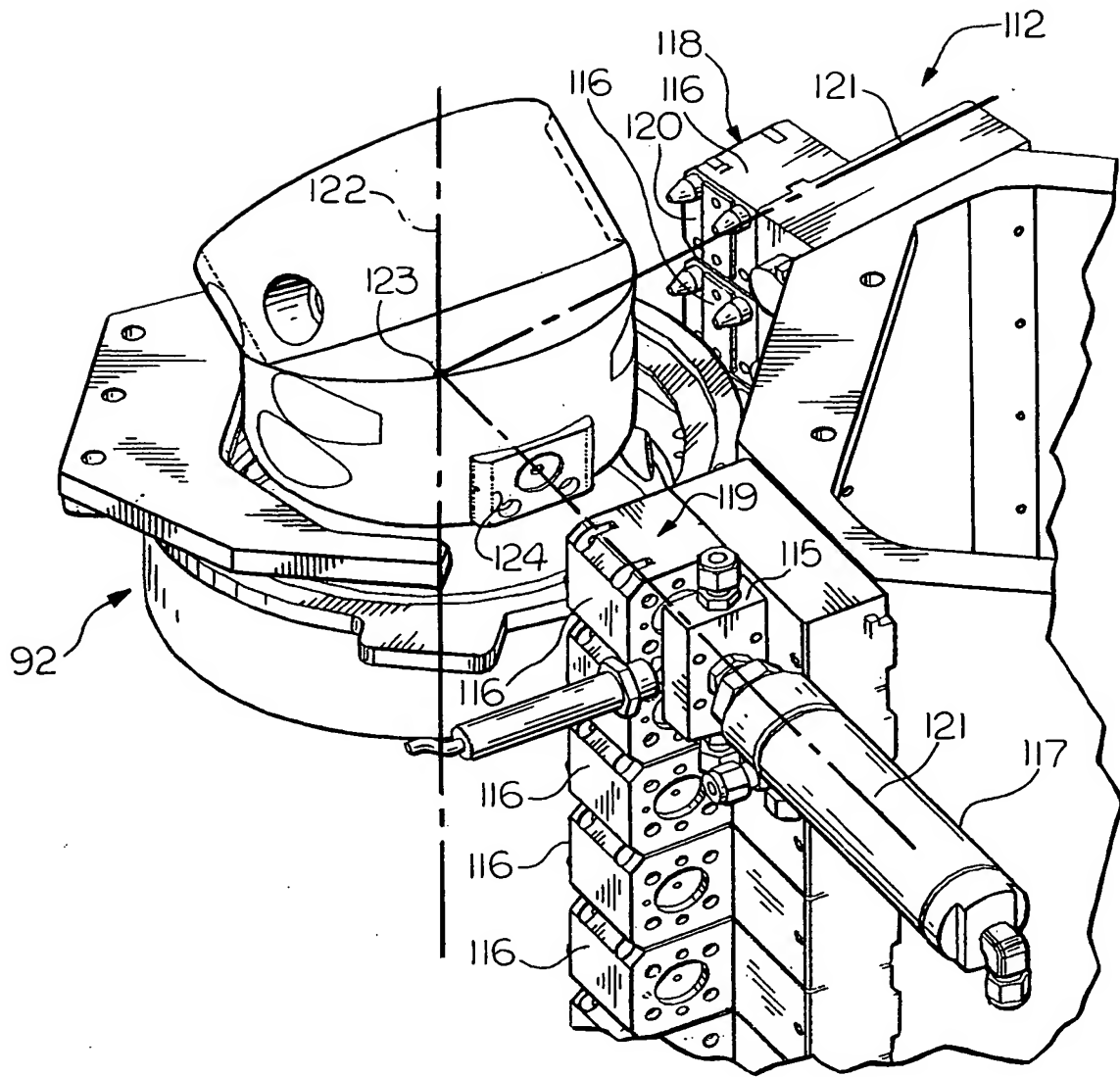


FIG. 19

